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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/803,051

03/18/2004

Ronald S. Plantan

011351.52877US

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23911 7590 12/09/2008  
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EXAMINER

BURCH, MELODY M

ART UNIT

PAPER NUMBER

3657

MAIL DATE

DELIVERY MODE

12/09/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/803,051	<b>Applicant(s)</b> PLANTAN, RONALD S.	
	<b>Examiner</b> Melody M. Burch	<b>Art Unit</b> 3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |



## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/14/08 has been entered.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by WIPO 2004/026649 to Simmons.

Re: claims 1-3. Simmons shows in figure 5 a brake disc 18 comprising a hub portion shown immediately to the left of the circle at the end of lead line 24, a friction portion shown in the area of the circle at the end of element number 18, the friction portion formed as a generally planar ring and a connecting flange portion shown in the

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area to the right of the circle at the end of the lead line for element number 20 wherein the connecting flange portion connects a radially outer region of the hub portion to a radially inner region of the friction portion radially inward from a radially inner most friction surface of the friction portion, the connecting flange portion has a length such that when the hub portion and a wheel rim as labeled in the annotated version of figure 5 of Simmons provided in this Office action (see pg. 6) adapted to be mounted on a hub end as labeled of a vehicle axle 14 are concentrically located at the hub end of the axle, the friction portion is outboard of the wheel rim, and the friction portion has an outer radius greater than a greatest inner radius of the wheel rim as shown.

Re: claims 4-6. Simmons in figure 5 shows an at least one heat-conduction limiting section or reduced thickness shown at the bottom of the portion shown in the area of the end of the lead line of number "18".

Re: claims 7-9. Simmons shows in figure 5 at least one ventilation aperture as labeled in the annotated figure provided in this Office action.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simmons in view of US Patent Application 2002/0166740 to Zhang.

Simmons describes the invention substantially as set forth above, but is silent with regards to the presence of cooling fins.

Zhang teaches in figures 2 and 2A the use of a disc having cooling fins 243 disposed about an inner radius of the friction portion.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the disc of Simmons to have included cooling fins, as taught by Zhang, in order to provide a means of improving heat dissipation.

6. Claims 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simmons in view of US Patent 4583609 to Anderson et al.

Re: claim 16. See the rejection of claim 1 but Simmons is silent with regards to the disc brake including a brake caliper adapted to be affixed to a caliper mount on the vehicle axle such a braking force generated by the brake caliper is applied to the brake disc.

Anderson et al. teach in figure 2 and in col. 2 lines 7-10 the use of a brake disc having a friction portion outboard of a wheel rim that is arranged such that braking force generated by a brake caliper adapted to be affixed to a caliper mount 84 on the vehicle axle 42 is applied to the brake disc.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the disc brake of Simmons to have included a brake caliper, as taught by Anderson et al., in order to provide a means of generating pressure to exert on the brake disc to decelerate the wheel.

Re: claims 17-19. Simmons, as modified, teaches in figure 5 of Simmons an at least one heat-conduction limiting section or reduced thickness shown at the bottom of the portion shown in the area of the end of the lead line of number "18".

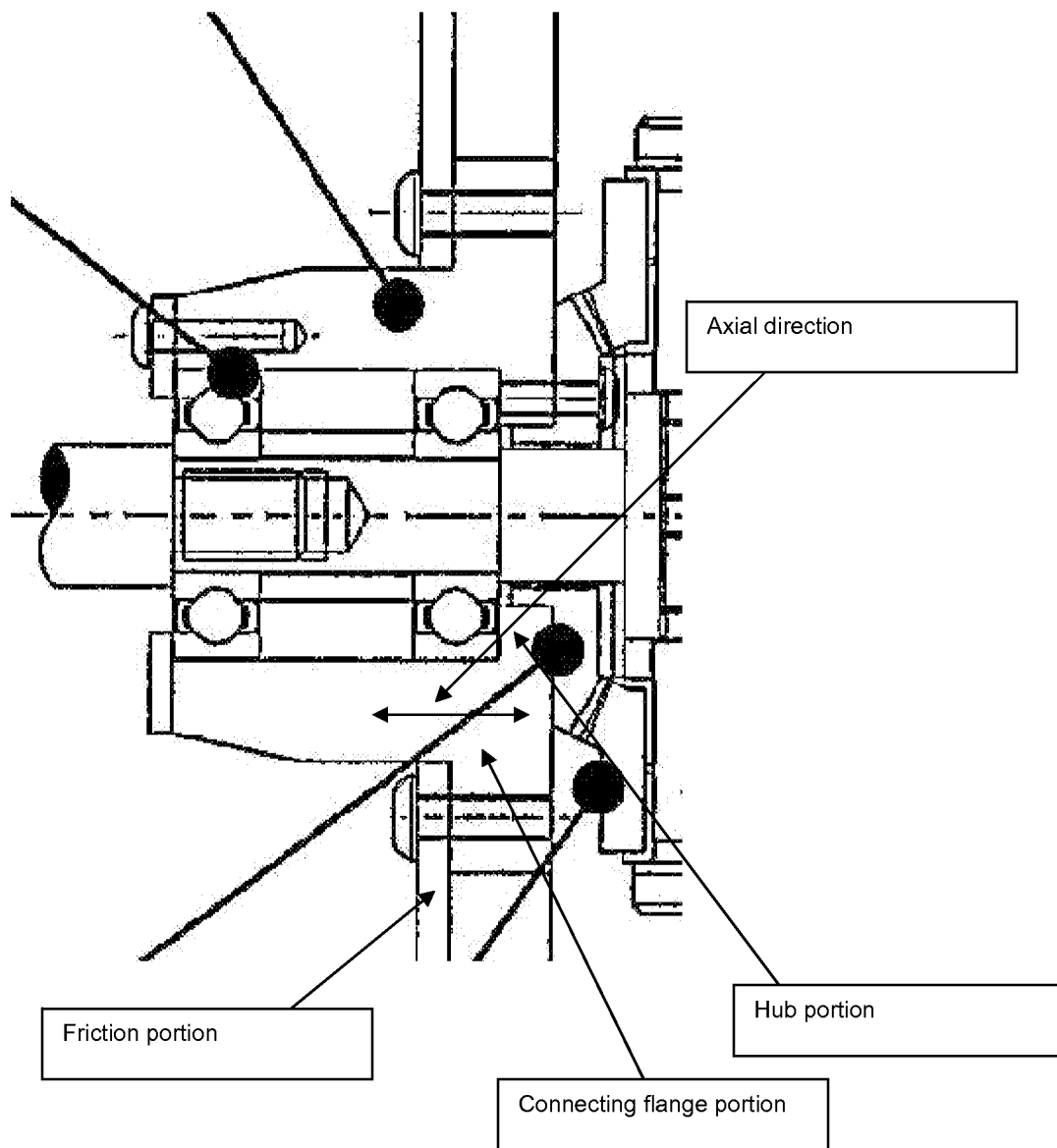
Re: claims 20-22. Simmons, as modified, teach in figure 5 of Simmons at least one ventilation aperture as labeled in the annotated figure provided in this Office action.

7. Claims 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simmons in view of Anderson et al. as applied above, and further in view of US Patent Application 2002/0166740 to Zhang.

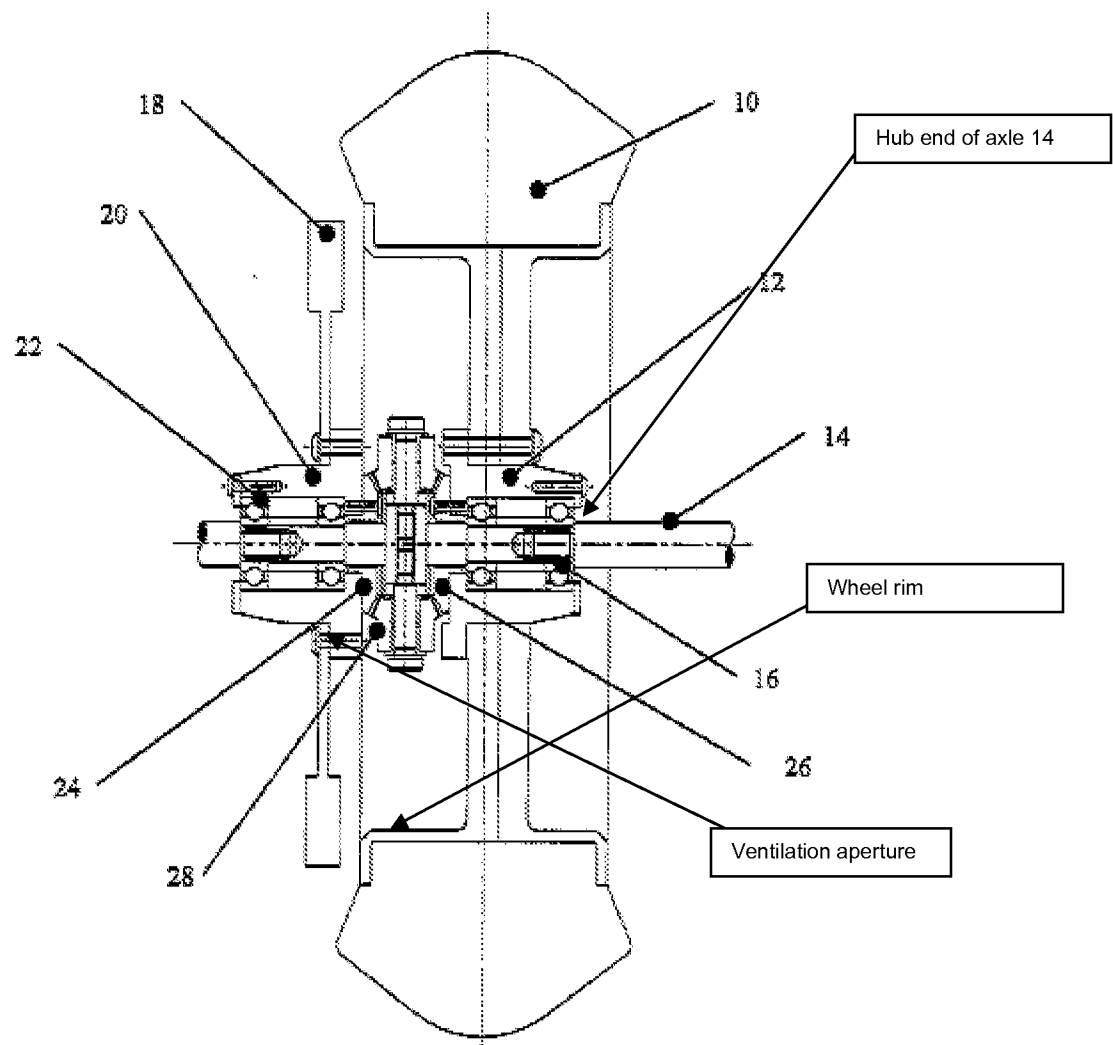
Simmons, as modified, describes the invention substantially as set forth above, but is silent with regards to the presence of cooling fins.

Zhang teaches in figures 2 and 2A the use of a disc having cooling fins 243 disposed about an inner radius of the friction portion.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the disc of Simmons, as modified, to have included cooling fins, as taught by Zhang, in order to provide a means of improving heat dissipation.







### ***Response to Arguments***

8. Applicant's arguments filed 11/14/08 have been fully considered but they are not persuasive. Applicant argues that the hub portion 20 of Simmons is not adapted to be mounted on a hub end of a vehicle but is instead mounted to the outboard side of a gear assembly 24-28 and not the hub end of an axle. Examiner disagrees. First,

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Examiner notes that the “adapted to be mounted on a hub end of a vehicle axle” phrase is associated with the wheel rim. The limitation at issue is “when the hub portion and wheel rim...are concentrically *located at the hub end of the axle*.” Examiner notes that the hub portion and wheel rim are concentrically located since they share a common axis as shown. Examiner further notes that the hub portion is located at the hub end of the axle by way of the gear assembly. There is nothing in the claim language to preclude the arrangement of the hub portion at the hub end of the axle by way of the gear assembly. As broadly recited, the hub end of the axle is the end of the axle that accommodates the hub portion. Examiner maintains that the hub end of the axle of Simmons accommodates the hub portion by way of a gear assembly.

Applicant further notes that Simmons does not disclose or suggest the limitation wherein the hub portion is “displaced in an axial direction from the friction portion”, “the connecting flange portion extends in the axial direction to connect” the hub and friction portions, or “the connecting flange portion has a length such that when the hub portion [of the brake disc]...[is] located at the hub end of the axle, the friction portion is outboard of the wheel rim.” Examiner disagrees and has included an annotated version of an enlarged portion of figure 5 of Simmons on pg. 6 of the instant Office action for clarification. The annotated figure shows the hub portion being displaced in an axial direction from the friction portion and the connecting flange portion extending in an axial direction. Finally, it is shown that the connecting flange portion has a length such that when the hub portion is located at the hub end of the axle, via the gear assembly in this

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case, the friction portion is outboard of the wheel rim. Accordingly, the rejections have been maintained.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mmb  
December 7, 2008

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/Melody M. Burch/

Primary Examiner, Art Unit 3657